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DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350-2000

IN REPLY REFER TO
OPNAVINST 8011.9A
OP-703

11 AUG 1993

OPNAV INSTRUCTION 8011.9A

Subj: NON-NUCLEAR ORDNANCE REQUIREMENTS (NNOR) PROCESS

Ref: (a) OPNAVINST S 8010.12E Ser 411C1/7S393510 of 20 Apr 1987 (NOTAL)
(b) OPNAVNOTE 8010 Ser 095/4U342085 of 30 Apr 1984 (NOTAL)
(c) OPNAVINST 5420.2P (NOTAL) of 14 Apr 1988
(d) CNO memo Ser 703/9S638419 of 30 Jan 1989 (NOTAL)
(e) CNO memo Ser 411/7S3995554 of 24 Sep 1987 (NOTAL)
(f) Defense Guidance FY 1990-1994

Encl: (1) NNOR Milestones

1. Purpose. To delineate procedures, responsibilities and milestones for the Non-Nuclear Ordnance Requirements (NNOR) process. This instruction is a complete revision and must be reviewed in its entirety.

2. Cancellation. OPNAVINST C8011.9.

3. Background

a. Management responsibilities, policies and procedures for non-nuclear ordnance programs are delineated by reference (a). Combat ordnance requirements are determined by the Chief of Naval Operations (CNO) through the annual Non-Nuclear Ordnance Requirements (NNOR) review and approval process. Utilizing the NNOR methodology and the Secretary of Defense Guidance, the requirement for non-nuclear ordnance is established as the sum of combat and non-combat requirements.

(1) Combat requirements for those weapons included in the NNOR process are computed annually, by the Director, Naval Warfare Analysis, Assessment and Force Level Plans Division (OP-70), based upon inputs from the Navy and Marine Corps Headquarters and field staffs. The combat requirement is expressed as the Program and Planning Objective. These terms are defined below in paragraph 5.

(2) Non-combat requirements are computed by the Non-Combat Expenditure Requirements (NCER) process, under the direction of the Tactical Readiness Division (OP-73), as described in reference (b).

b. The Non-Nuclear Ordnance Planning (NNOP) Board, established by reference (c), provides top-level direction to the NNOR process, including approval of requirements. The mission of the NNOP Board is discussed further in paragraph 6.

4. Scope. This instruction applies to the computation of combat (i.e., war reserve) requirements for selected Threat and Level-of-Effort (LOE) non-nuclear ordnance under the purview of the NNOR process. Only Department of the Navy Threat and LOE ordnance, which the NNOP Board has agreed to include in the NNOR process, are within the scope of this instruction. A complete listing of ordnance for which an annual requirement is computed under the NNOR process is reflected in reference (d). This list is updated annually at the commencement of the NNOR update cycle.

a. Threat ordnance is used against a finite enemy target base, or enemy targets not easily reconstituted. Targets include ships, submarines, aircraft and anti-ship cruise missiles. Threat ordnance currently includes torpedoes (MK-48 ADCAP and MK-50), air-to-air missiles (PHOENIX, AMRAAM, SPARROW and SIDEWINDER), surface-to-air missiles (Standard Missile, RAM and SEASPARROW), anti-ship cruise missiles (HARPOON and TOMAHAWK Anti-Ship Missile (TASM)) and naval mines. The combat requirement (program and planning objectives) is based on the percentage of targets that must be destroyed.

b. LOE ordnance is composed of air-delivered ordnance used against unlimited enemy targets such as personnel, bridges, factories and tanks. Ship gun ammunition, countermeasure devices and sonobuoys are used according to a specified expenditure rate. LOE ordnance currently includes bombs (MK-80 Series and Rockeye), guided and unguided air-to-surface weapons (laser guided bombs, IR Maverick, Laser Maverick, Hellfire, 2.75 inch and 5 inch rockets, Advanced Interdiction Weapon System (AIWS), Standoff Land Attack Missile (SLAM) and Penguin), antiradiation weapons (HARM, SIDEARM, and Tacit Rainbow), 16-inch and 5-inch ship gun ammunition, airborne, shipboard and submarine expendable countermeasure devices (flares, chaff and noisemakers) and sonobuoys. The combat requirement is based on either the physical ability to deliver the weapons (number of aircraft sorties) or an expenditure rate (rounds per day, expendables per encounter or sonobuoys per sortie), rather than the percentage of targets that must be destroyed.

c. The NNOR process does not currently compute a combat requirement for nuclear, chemical or biological weapons, small arms ammunition, or Marine Corps ground ammunition. TOMAHAWK

(other than TASM) is currently excluded from the NNOR ordnance list together with older, less capable models of some threat weapons (e.g., AIM-54A and MK-48 Mod 4 torpedo) and ship gun ammunition under five inches. For ordnance under the purview of the platform/resource sponsors (i.e., ship gun ammunition under five inch), reference (e) establishes the methodology for computing combat requirements in accordance with reference (f) guidelines.

5. Combat Requirements. The determination of quantities of Threat and LOE ordnance, procured by the Department of the Navy is based on the combat requirement, which is defined as the war reserve inventory necessary to achieve the objectives established by reference (f). NNOR objectives are defined below:

a. The program and planning objectives, for Threat ordnance combat requirements, are the war reserve requirements. Threat ordnance computations are based upon killing specific percentages of the enemy threat, allocated to the Navy and Marine Corps and includes the maintenance pipeline.

b. The program and planning objectives, for LOE ordnance combat requirements, are the war reserve requirements. LOE ordnance computations sustain a specific number of days of combat (DOC) as defined in reference (f). LOE ordnance computations take into consideration shipping losses.

6. NNOR Review. The NNOR process is under the cognizance of the NNOP Board with support from the NNOP Board Review Group.

a. The mission of the NNOP Board is: to optimize non-nuclear ordnance requirements to ensure maximum readiness and sustainability to counter the current and projected threat; to translate ordnance requirements into programming and planning objectives; and to conduct a comprehensive review of weapons lethality and effectiveness for each resource sponsor during the NNOR input review process. The Deputy Chief of Naval Operations (Naval Warfare) (OP-07) chairs the NNOP Board, which includes members from the staff of the Chief of Naval Operations (OPs-02, 03, 04, 05, 06, 08, and 098), Commander, Naval Sea Systems Command (COMNAVSEASYSCOM), Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) and the Commandant of the Marine Corps (CMC(A)).

b. The NNOP Board Review Group was established to support the NNOP Board. It is chaired by the Director, Naval Warfare Analysis, Assessment and Force Level Plans Division (OP-70) and consists of representatives of the NNOP Board members listed above, plus Fleet Commander representatives. The NNOP Board Review Group examines NNOR methodology, input data and computed requirements prior to review by the NNOP Board and, by consensus, may approve any issue submitted for decision.

7. Annual NNOR Update. The purpose of the NNOR process is to establish combat requirements of designated ordnance for use in the Program Objective Memorandum (POM) development. This is accomplished through a family of computer models utilizing an approved data base. The NNOR process is conducted on an annual cycle following the milestone schedule established at enclosure (1). The key milestones are amplified below:

a. Data base update. The annual NNOR process is initiated with the issuance, for update, of the approved data base. Participants submit revised data, for their area of responsibility, under flag, division director or commanding officer signature.

b. Issue submission. During the call for the data base update, any participant may submit issues relating to any aspect of the update. Issues should reflect an adequate discussion of concerns, together with suggested alternatives and impacts and, whenever possible, a specific recommendation to correct the problem or deficiency identified in the issue paper.

c. NNOR Working Group. The NNOR Working Group supports the NNOP Board Review Group and the NNOP Board. It consists of working level (Action Officers) representatives of the NNOP Board Review Group, the Naval Strike Warfare Center (NSWC) and Marine Aviation Weapons and Tactics Squadron (MAWTS). The Working Group reviews the data base update and all proposed issues and formulates a staff program proposal for presentation to the NNOP Board Review Group. All significant issues in the data base update cycle are presented to the NNOP Board Review Group.

d. Data base validation and approval. Changes proposed to the data base must be consistent with programmatic data and related warfighting data. The NNOP Board Review Group has oversight responsibility for all data change submissions. The

NNOP Board Review Group may validate and approve all changes and revised combat requirements proposed during the update cycle. Issues that cannot be resolved by the NNOP Board Review Group will be forwarded to the NNOP Board for final determination. If data are not changed during the update cycle the current data will be used for model computations.

e. Model computations and evaluation. After the data base is revised, requirements are computed and compared with both the predicted results and previous computations. Model output which is at great variance from forecast values is examined in detail in order to identify the cause and rationale for the deviations.

f. Output approval. Revised requirements, computed from the updated data base, are subject to the approval of the NNOP Board Review Group. The NNOP Board Review Group is charged with oversight responsibility regarding the NNOR output data and revised combat requirements. The NNOP Board Review Group may validate and approve NNOR output data. Those issues which the NNOP Board Review Group does not resolve will be forwarded to the NNOP Board for final determination.

g. Unusual Circumstances. Under very unusual conditions the NNOP Board may override model computations.

h. Requirements documentation. The approved requirements will be promulgated for use in the Department of the Navy budget cycle development.

8. NNOR Models. NNOR methodology is developed by the Strategic Warfare and Weapons Analysis Branch (OP-703) and by other Office of the Chief of Naval Operations (OPNAV) organizations as directed by the NNOP Board. Although all combat requirements are not computed utilizing the same model and methodology, OP-703 will maintain cognizance over all NNOR activities. For requirements derived by models held external to OP-703, an annual report of the methodology will be forwarded to the Weapons Analysis Branch. OPNAV Sponsors listed in paragraph 10d will also brief the NNOP Board Review Group and, if required, the NNOP Board on computation methodologies, changes to their respective model and data base, issues and revised combat requirements. Once a data base and methodology have been approved, the computed results are promulgated by OP-07 (OP-70) as the NNOR output (combat requirements).

9. Addition/Deletion of Ordnance

a. The NNOR process encompasses a variety of ordnance. Although theoretically any item of non-nuclear ordnance can be introduced into the NNOR process, historically ordnance has been included to focus attention on high unit cost, to ensure maximum readiness and sustainability of the weapon (or item) over the duration of its in-service life and due to Department of the Navy, Office of the Secretary of Defense, or Congressional interest. Other critical warfighting factors, such as lethality and effectiveness of the weapon, are considered by the NNOP Board when an issue to add a weapon to the process is deliberated. Proposals to introduce in-service weapons to the NNOR process should be forwarded (as issues) during the data base update cycle.

b. New ordnance may be proposed for inclusion in the NNOR process when it has an approved Operational Requirement (OR) and an Initial Operating Capability (IOC) within the Six-Year Defense Program (SYDP). The addition of a new weapon is initiated by the appropriate resource sponsor during the data update phase. In addition to the above criteria, new ordnance proposals must contain information on platforms, shipfills, effectiveness and utilization. The NNOR will compute a combat requirement for a new weapon only when the NNOP Board (or the NNOP Board Review Group acting within its charter) approves the new weapon for inclusion in the process.

c. The list of weapons for which the NNOR process computes a combat requirement will be reviewed and validated annually. A weapon is normally deleted from the NNOR process when it is superseded by a more current weapon (e.g., MK-48 Mod 4 torpedo replaced by MK-48 ADCAP torpedo). However, an issue to delete a weapon may be initiated at any time during the data update phase.

10. Action. The NNOR process will be executed as follows:

a. The Deputy Chief of Naval Operations (Naval Warfare) (OP-07) has overall responsibility for execution of the NNOR process. OP-07 chairs the NNOP Board.

b. OP-70 is the Executive Agent for the Deputy Chief of Naval Operations (Naval Warfare) (OP-07) and is tasked with the overall responsibility for all aspects of the NNOR process. OP-70 chairs the NNOP Board Review Group.

c. OP-703 performs the following tasks:

(1) Guides and oversees the development of methodologies used to determine combat requirements as directed by the NNOP Board.

(2) Chairs the NNOR Working Group.

(3) Maintains the computer models used to compute combat requirements for Threat ordnance, air-launched LOE and ship gun ammunition. Computation of other combat requirements are further discussed in paragraph 10d.

(4) Ensures models developed by other OPNAV organizations meet overall compliance with NNOP Board guidance.

(5) Staffs the NNOR data base for yearly updates from OPNAV (OPs-02, 03, 04, 05, 06, 07, 08, 092, 098), CMC, NAVAIR and NAVSEA System Commands, Fleet Commanders (FLTCINC's), Naval Strike Warfare Center (NSWC) and MAWTS.

(6) Maintains a record (audit trail) of all changes to the NNOR data base approved by the NNOP Board Review Group or the NNOP Board.

(7) Computes combat requirements (program and planning objectives) for threat ordnance, air-launched LOE and ship gun ammunition and presents output results to the NNOP Board Review Group or the NNOP Board for approval. Management responsibilities, for requirements derived by models held external to OP-703, are addressed in paragraph 8.

(8) Publishes the approved methodology, data base and combat requirements annually. NNOR output addresses the time-frame encompassed by the Six Year Defense Program (SYDP), plus and minus two years.

d. The following organizations are responsible for those management aspects related to the computation of combat requirements for programs under their cognizance:

(1) OP-22; submarine expendable countermeasures.

(2) OP-71; sonobuoys.

(3) OP-72 and Commander Mine Warfare Command (COMINEWARCOM); naval mines

(4) OP-76; airborne and shipboard expendable countermeasures.

e. The following OPNAV and CMC organizations will review and update the NNOR data base annually for the assigned areas indicated. The President's Budget (Resource Allocation Display III) is the programmatic baseline for all updates:

(1) All resource sponsors for lethality and effectiveness data review and update.

(2) OPs-02, 03 and 05 for submarine, surface ship and aircraft programs, respectively.

(3) OP-04 for logistics related data.

(4) OP-06 for scenario, threat and force employment data.

(5) OP-08 for accuracy of programmatic data provided by sponsors.

(6) OP-092 for updating characteristics of threat platforms.

(7) OP-098 for Research and Development (R&D) data.

(8) CMC(A) for Marine Corps programs.

f. The following organizations will review and update the data base to ensure that the most current (warfighting) concepts of operations and tactics are included:

(1) Commander in Chief, U.S. Pacific Fleet (CINCPACFLT), Commander in Chief, U.S. Atlantic Fleet (CINCLANTFLT) and Commander in Chief U.S. Naval Forces, Europe (CINCUSNAVEUR)

(2) NSWC

(3) Marine Air Weapons and Tactics Squadron (MAWTS-1)

11. Reports. The reports required by this instruction are exempt from reports controlled by SECNAVINST 5214.2B.

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NNOR MILESTONES

ACTION	Completion Date
• OP-07 NNOR Approved Data Base distributed	1 February
• OPNAV, CMC, NSWC, MAWTS and FLTCINCS data base changes submitted	1 March
• NNOR Working Group issues resolved	15 May
• NNOP Board and NNOP Board Review Group data base validation completed	1 June
• Model computations and evaluation completed	1 September
• NNOR requirements approved and promulgated	30 September